IN THE CLAIMS

1. (AMENDED) A method for determining the absolute quantity of a target biopolymer[, such as a selected protein,] in a crude solution, comprising the steps of:
   (a) adding a known quantity of an analog of said target biopolymer to said solution;
   (b) treating the target biopolymer and analog with a fragmenting activity to generate a plurality of corresponding biopolymer-fragment pairs;
   (c) resolving [the] into a biopolymer-fragment content [of the] forming a mixture;
   (d) determining by mass spectrometric analysis the ratio of a selected target biopolymer to its corresponding analog; and
   (e) calculating, from said ratio and said known quantity of said analog, the absolute quantity of the target biopolymer in the mixture.

2. Please cancel claim 2.

3. The method of claim [2] 1, wherein the biopolymer is a polypeptide.

4. (WITHDRAWN)

5. The method of claim 1, wherein the solution is a crude fermenter solution, a cell-free culture fluid, a cell extract, or a mixture comprising the entire complement of proteins in a cell or tissue.

6. The method of claim 1, wherein either said target biopolymer or said analog is isotope labeled.

7. The method of claim 6, wherein said label is a stable isotope selected from the group consisting of ^{18}O, ^{15}N, ^{13}C, and ^{2}H.

8. The method of claim 7, wherein one of said target biopolymer and said analog is enriched in ^{15}N, and the other contains a natural abundance of N isotopes.

9. The method of claim 8, wherein said target biopolymer or said analog is produced synthetically using ^{15}N-enriched precursor molecules.

10. The method of claim 8, wherein the target biopolymer or analog enriched in ^{15}N is produced by a microorganism grown on ^{15}N-enriched media.

11. The method of claim 3, wherein said step of fragmenting is carried out by treating said solution containing said target polypeptide and said analog with a proteolytic enzyme.

12. The method of claim 11, wherein said proteolytic enzyme comprises trypsin.

13. The method of claim 1, wherein said step of resolving is [effected] affected by a chromatographic technique.

14. The method of claim 13, wherein said chromatographic technique is HPLC or reverse-phase chromatography.

15. The method of claim 1, wherein the target biopolymer is selected from the group consisting of enzymes, antibodies, receptors, hormones, growth factors, antigens, and ligands.

Claims 16-33 (WITHDRAWN)